ADDENDUM 3. Endangered Species Act Section 7 Correspondence with National Oceanic and Atmospheric Administration, National Marine fisheries Service and U.S. Fish and Wildlife Service Site Specific Environmental Assessment Rangeland Grasshopper Suppression Program South Central Idaho EA Number ID-06-03

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

February 17, 2006

David McNeal, Jr.
State Plant Health Director
Animal and Plant Health Inspection Service
9134 West Blackeagle Drive
Boise, Idaho 83709

RE: 2006 Idaho Rangeland Grasshopper and Mormon Cricket Suppression Programs

Dear Mr. McNeal:

This responds to the January 30, 2006, letter regarding Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act issues pertinent to the subject action. The Animal and Plant Health Inspection Service (APHIS) has determined this project would have no effect on ESA listed Snake River salmon and steelhead, designated critical habitat, or Essential Fish Habitat (EFH) under the jurisdiction of National Marine Fisheries Service (NMFS) so consultation is not necessary.

We appreciate your sharing the basis of the no effect determination so we have an understanding of the basis of your determination if questions arise. If new information becomes available, or if circumstances occur that may affect listed species, designated critical habitat, or EFH please contact us. We look forward to working with you to provide technical assistance to this year's treatment program. Ms. Debbie Artimez (208) 378-5648 is the NMFS contact.

Sincerely,

David J Mola
for

D. Robert Lohn
Regional Administrator

United States Department of Agriculture

Marketing and Regulatory Programs

Animal and Plant Health Inspection Service

Plant Protection and Quarantine

9134 West Blackeagle Dr.
Boise, ID
83709

(208) 378-5797
FAX: 378-5794

January 30, 2006

Debbie Artimez
NOAA Fisheries
10215 W. Emerald #180
Boise, ID 83709

Re: 2006 Idaho Rangeland Grasshopper and Mormon Cricket Suppression Programs

Dear Ms. Artimez:

This is to request your concurrence that our proposed 2006 Rangeland Grasshopper and Mormon cricket Suppression programs in Idaho would have no effect on anadromous fish species, designated critical habitat, or Essential Fish Habitat under NOAA Fisheries jurisdiction and therefore no consultation is required under the Endangered Species Act or the Magnuson-Stevens Fishery Conservation and Management Act. Our determination is based on our decision to define the proposed suppression area so that Idaho watersheds of the Salmon River and its tributaries, and the Snake River and it's tributaries below Brownlee Dam are excluded from treatments. Animal and Plant Health Inspection Service (APHIS) would not apply pesticides to any watersheds in Idaho except those which lead to the Snake River above Brownlee Dam or those which drain to the Salt Lake Basin. Therefore, all watersheds in Idaho that contain listed salmon and steelhead (or critical habitat) would be excluded from the treatment program.

We had anticipated need for treatments in northern Idaho areas where watersheds would contain listed species, but further study of land ownerships and other factors have convinced us that it would not be feasible for us to conduct treatments in those areas in 2006. We will, however, continue to develop a biological assessment against the possibility of need for treatments in subsequent years.

Thank you for your consideration of our proposal. We look forward to your concurrence that no consultation is required for the actions which are proposed in our Site Specific Environmental Assessments for Rangeland Grasshopper and Mormon Cricket Suppression Programs in Idaho during 2006. Please call me or Rob McChesney with any questions on this issue.

Sincerely,

C. David McNeal, Jr.
State Plant Health Director

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Fish and Wildlife Office
1387 S. Vinnell Way, Room 368
Boise, Idaho 83709
Telephone (208) 378-5243
http://IdahoES.fws.gov

FEB 2 4 2006

C. David McNeal, Jr.
State Plant Health Director
United States Department of Agriculture
Animal and Plant Health Inspection Service
9134 W. Blackeagle Drive
Boise, Idaho 83709

Subject: 2006 Idaho Grasshopper and Mormon Cricket Suppression Program - Concurrence
File #130.0000 I 06-358

Dear Mr. McNeal:

The Fish and Wildlife Service (Service) is writing to provide concurrence with your determination of effects for the proposed 2006 Grasshopper and Mormon Cricket Suppression Program (Program) on federally managed rangelands in southern Idaho. In a letter and Biological Assessment (Assessment) dated December 28, 2005 and received by the Service on December 29, 2005, the Animal and Plant Health Inspection Service (APHIS) requested concurrence with determinations for listed species listed as threatened or endangered under the under the Endangered Species Act of 1973 (Act), as amended. The species evaluated in the Assessment include: Ute Ladies'-tresses (*Spiranthes diluvialis*), bald eagle (*Haliaeetus leucocephalus*), whooping crane (*Grus americana)*, bull trout (*Salvelinus confluentus*), Banbury Springs limpet (*Limpet* sp.), Bliss Rapids snail (*Taylorconcha serpenticola*), Idaho springsnail (*Pyrgulopsis idahoensis*), Snake River physa (*Physa natricina*), Utah valvata snail (*Valvata utahensis*), Brunneau hot springsnail (*Pyrgulopsis bruneauensis*), and northern Idaho ground squirrel (*Spermophilus brunneus brunneus*). You have also determined that the proposed action will not result in the adverse modification of designated bull trout critical habitat, and we have noted your determinations of no effect to grizzly bear (*Ursus arctos*), Canada lynx (*Lynx canadensis*), and gray wolf (*Canis lupus*)

It is our understanding that APHIS is proposing to conduct or support suppression programs on Mormon crickets and grasshopper outbreaks on rangelands in southern Idaho. APHIS will be working with land management agencies in the design and implementation of a suppression program that would take place from April 1, 2006 to August 15, 2006 in portions of Cassia, Adams, Twin Falls, Minidoka, Jerome, Lincoln, Bear Lake, Bingham, Blaine, Clark, Fremont, Custer, Caribou, Jefferson, Bonneville, Madison, Butte, Washington, Valley, Payette, Gem, Boise, Ada, Elmore, Owyhee, Camas, Gooding, Power, Oneida, and Bannock counties. Grasshopper and cricket

population sizes that trigger the need for a suppression program will be considered on a case-by-base basis. The preferred alternatives identified in the Assessment are described as Modified Reduced Agent Area Treatments and Reduced Agent Area Treatment for Mormon crickets and grasshoppers, respectively. Details of these treatments are described on pages 3 to 8 in the Assessment. Protective mitigation measures have been developed for each of the species and are described on pages 9 to 14 of the Assessment. Additional assessments will be made of all potential treatments, and in conjunction with land managers APHIS may impose more stringent protective measures if they are warranted, on a site-specific basis.

Based on the information provided in the Assessment, the Service concurs with your conclusion that the proposed project may affect, but is not likely to adversely affect the listed species identified above. These measures include species-specific buffers, avoidance of occupied habitat, and restricted methods of application. Table 4 on page 13 of the Assessment identifies these protective measures. The Service has also noted the commitment of APHIS to abide by the Slickspot Peppergrass Candidate Conservation Agreement and to employ specific measures therein to ensure protection of slickspot peppergrass (*Lepidium papilliferum*) and associated pollinators.

This concludes consultation for 2006 Grasshopper and Mormon Cricket Suppression Program under section 7 of the Act. If the project proposal addressed in this letter is modified, a new species is listed or critical habitat is designated that may be affected by the proposal, or environmental conditions change; you should reinitiate consultation with the Service. If you have any questions regarding our comments please contact Ray Vizgirdas at (208) 378-5249.

Sincerely,

for Jeffery L. Foss, Field Supervisor
Snake River Fish and Wildlife Office

cc: BLM - IDSO, Boise (Foster)

USDA

December 28, 2005

United States Department of Agriculture

Animal and Plant Health Inspection Service

Plant Protection and Quarantine

Idaho State Office

9134 W. Blackeagle Dr.
Boise, ID 83709

208-378-5797
208-378-5794 fax

US Fish and Wildlife Service
Snake River Fish and Wildlife Office
1387 S. Vinnell Way, Suite 368
Attn: Susan Burch
Boise, Idaho 83709

Subject: Informal Consultation for 2006 Idaho Grasshopper Mormon Cricket Suppression Program

Dear Susan:

The Animal and Plant Health Inspection Service (APHIS) is initiating a request for informal consultation for the implementation of the 2006 Mormon cricket and grasshopper suppression programs on federally managed rangeland in southern Idaho. Our determinations of effect for listed species are from the analysis provided in the 2002 Environmental Impact Statement (EIS) for APHIS suppression activities in 17 states, from the 1995 National Biological Opinion on the Grasshopper Program, and from previous consultations in Idaho.

APHIS has determined that the proposed action will not affect Grizzly Bear, Canada lynx, and Gray wolf.

We have determined the suppression program may affect, but is not likely to adversely affect Ute Ladies tresses, bald eagle, whooping crane, bull trout, Banbury Springs limpet, Bliss Rapids snail, Idaho springsnail, Snake River physa snail, Utah valvata snail, Bruneau hot springsnail, and northern Idaho ground squirrel. We have determined that the proposed action will not result in the adverse modification of proposed bull trout critical habitat. The analysis is presented in Table 1.

Table 2 lists the measures which will be applied to insure that no adverse effects occur to T&E Species. The measures in Table 2 are the minimal protective measures which would be applied. Additional assessments will be made of all potential treatment blocks, and in conjunction with land managers APHIS may impose more stringent protective measures if they appear warranted.

In addition, in coordination with the Service, we have incorporated measures into our proposed action to minimize the potential for effects to candidate species including Columbia spotted frog, yellow-billed cuckoo, Christ's paintbrush, and southern Idaho ground squirrel. Measures are listed in Table 3. The measures in Table 3 are the

minimal protective measures which would be applied. Additional assessments will be made of all potential treatment blocks, and in conjunction with land managers APHIS may impose more stringent protective measures if they appear warranted.

APHIS will abide by the Slickspot Peppergrass Candidate Conservation Agreement and will employ the other measures specified in Table 4 to ensure protection of slickspot peppergrass. Additionally, APHIS points out that Mormon crickets and several species of grasshoppers do feed on slickspot peppergrass. Therefore the benefits of grasshopper suppression programs in reducing herbivory by Mormon crickets and grasshoppers on slickspot peppergrass may far outweigh any possible detrimental effects on pollinators. The measures in Table 4 are the minimal protective measures which would be applied. Additional assessments will be made of all potential treatment blocks, and in conjunction with land managers APHIS may impose more stringent protective measures if they appear warranted.

With this letter APHIS is requesting concurrence with our determinations for listed and proposed species, and proposed critical habitat that may occur in southern Idaho within the area of the proposed 2006 Mormon cricket and grasshopper suppression programs.

Proposed Action

The proposed action is to conduct suppression programs on Mormon cricket and grasshopper outbreaks on rangeland in southern Idaho. Populations of Mormon crickets and grasshoppers reach infestation levels in some areas nearly every year in southern Idaho. APHIS regularly evaluates population levels to determine if site specific action is necessary to suppress outbreaks to protect rangeland ecosystems and to minimize the potential for the pests to spread into surrounding crops and communities. APHIS is proposing a program to suppress outbreak populations. We are working with land management agencies in the design and implementation of a suppression program that would take place from April 1, 2006 to August 15, 2006 in portions of Cassia, Adams, Twin Falls, Minidoka, Jerome, Lincoln, Bear Lake, Bingham, Blaine, Clark, Fremont, Custer, Caribou, Jefferson, Bonneville, Madison, Butte, Washington, Valley, Payette, Gem, Boise, Ada, Elmore, Owyhee, Camas, Gooding, Power, Oneida and Bannock Counties in southern Idaho.

Populations of Mormon crickets and grasshoppers that trigger the need for a suppression program are normally considered on a case-by-case basis. There is no specific population level that triggers APHIS participation. Three Mormon crickets or eight grasshoppers per square yard is the minimum density for which a suppression program would be considered. In response to suppression requests from land managers, APHIS would determine if an outbreak has reached an economically or environmentally critical level. If so, an appropriate treatment would be developed, taking into account additional site specific information.

Participation at a site-specific level would be based on potential damage such as reduction of forage and habitat available for some species of wildlife and livestock, destruction of rangeland revegetation projects, creation of public nuisances, and

endangerment of road traffic. Participation would also be based on the benefit of treatments including protection of forage and habitat, increased probability of success for rangeland revegetation projects, elimination of public nuisances, and prevention of hazards to road traffic. Some populations that may not cause substantial damage to native rangeland may require suppression to prevent damage to highly economically valuable crops on nearby private land. As provided for by the Plant Protection Act, APHIS would conduct Mormon cricket and grasshopper suppression programs on Federal lands in response to requests from the administering agency. Over the past two decades, most of the suppression programs in Idaho have been on lands administered by the Bureau of Land Management (Bureau). Smaller amounts of National Forest System lands have been treated.

Mormon cricket treatments might occur on rangelands removed some distance from cropland. Grasshopper treatments would only be on rangeland within one mile of cropland.

Preferred Alternatives

In the **Mormon cricket** Environmental Assessment (EA) we are describing four alternatives:

A. No Action Alternative

Alternative A, the no action alternative, APHIS would not fund or participate in any program to suppress Mormon cricket infestations. Under this alternative, APHIS may opt to provide survey information and limited technical assistance, but any suppression program would be implemented by a Federal land management agency, a State agriculture department, a local government, or a private group or individual.

B. Insecticide Applications at Conventional Rates and Complete Area Coverage Alternative

Alternative B, insecticide applications at conventional rates and complete area coverage, is generally the approach that APHIS used for many years. Under this alternative, carbaryl, diflubenzuron (Dimilin®), or malathion would be employed. Carbaryl and malathion are insecticides that have traditionally been used by APHIS. The insect growth regulator, diflubenzuron, is also included in this alternative. Applications would cover all treatable sites within the designated treatment block per label directions. The application rates under this alternative are as follows:

- 16.0 fluid ounces (0.50 pound active ingredient (lb a.i.)) of carbaryl spray per acre;
- 10.0 pounds (0.50 lb a.i.) of 5 percent carbaryl bait per acre;
- 1.0 fluid ounce (0.016 lb a.i.) of diflubenzuron per acre; or
- 8.0 fluid ounces (0.62 lb a.i.) of malathion per acre.

In accordance with EPA regulations, these insecticides may be applied at lower rates than those listed above. Additionally, coverage may be reduced to less than the full area coverage, resulting in lesser effects to nontarget organisms.

The potential generalized environmental effects of the application of carbaryl, diflubenzuron, and malathion, under this alternative are discussed in detail in the 2002 EIS (Environmental Consequences of Insecticide Applications at Conventional Rates and Complete Area Coverage Alternative, pp. 38–48). A description of anticipated site-specific impacts from this alternative may be found in the 2005 Mormon cricket EA.

C. Reduced Agent Area Treatments (RAATs) Alternative

Alternative C, RAATs, is a recently developed grasshopper suppression method in which the rate of insecticide is reduced from conventional levels, and treated swaths are alternated with swaths that are not directly treated. The RAATs strategy relies on the effects of an insecticide to suppress Mormon crickets within treated swaths while conserving Mormon cricket predators and parasites in swaths not directly treated. Either carbaryl, diflubenzuron, or malathion would be considered under this alternative at the following application rates:

- 8.0 fluid ounces (0.25 lb a.i.) of carbaryl spray per acre;
- 10.0 pounds (0.20 lb a.i.) of 2 percent carbaryl bait per acre;
- 0.75 fluid ounce (0.012 lb a.i.) of diflubenzuron per acre; or
- 4.0 fluid ounces (0.31 lb a.i.) of malathion per acre.

The area not directly treated (the untreated swath) under the RAATs approach is not standardized. In the past two years, the area that remains untreated within a treatment block has ranged from 80 to >99% percent in Idaho. The 2002 EIS analyzed the reduced pesticide application rates associated with the RAATs approach but assumed pesticide coverage on 100 percent of the area as a worst-case assumption. The reason for this is there is no way to predict how much area will actually be left untreated as a result of the specific action requiring this EA. For application to Idaho conditions in 2005, this Alternative would treat up to 50% of the land surface within a treatment block. Rather than suppress Mormon cricket populations to the greatest extent possible, the goal of this alternative is to suppress Mormon cricket populations to a desired level.

The potential environmental effects of application of carbaryl, diflubenzuron, and under this alternative are discussed in detail in the 2002 EIS (Environmental Consequences of Reduced Agent Area Treatments (RAATs), pp. 49–57). A description of anticipated site-specific impacts from this proposed treatment may be found in the 2005 Mormon cricket EA.

D. Modified Reduced Agent Area Treatments (RAATs) Alternative (Preferred

Alternative)

Alternative D combines the RAATs approach explained in Alternative C with the concentration of carbaryl bait explained in Alternative B and eliminates the carbaryl and malathion spray components included in Alternatives B and C. Either carbaryl bait or diflubenzuron spray would be considered under this alternative at the following application rates:

- 10.0 pounds (0.50 lb a.i.) of 5 percent carbaryl bait per acre;
- 10.0 pounds (0.20 lb a.i.) of 2 percent carbaryl bait per acre; or
- 0.75 fluid ounce (0.012 lb a.i.) of diflubenzuron per acre.

Although 0.20 lb a.i. of carbaryl bait may be sufficient for suppression of some species of grasshoppers in some situations, the very heavy Mormon cricket populations encountered in the current Idaho outbreaks would generally require the 0.50 lb a.i. rate.

Aerial applications of bait or spray would be made to no more than 50% of the land area within any specific treatment block (treat one swath and skip one swath), and would usually be made to 20% of the land area within any specific treatment block (treat one swath and skip four swaths). Thus the assessments of potential environmental impacts discussed in the 2002 EIS (5% carbaryl bait pp. 39-42; 2% carbaryl bait and 0.75 fluid ounce diflubenzuron pp. 50-55) are based on treatment rates 2X to 5X of those that would actually be applied under this alternative.

Ground applications of bait would be made to be made to no more than 50% of the land area within any specific treatment block, and may be made to as little as <1% of the land area within any specific treatment block. Ground applications would normally be made to existing roadsides and trailsides, but might be made off roads or trails with the concurrence of land managers.

In the **grasshopper** EAs we are also describing four alternatives with a preferred alternative:

A. No Action Alternative

Under Alternative A, the no action alternative, APHIS would not fund or participate in any program to suppress grasshopper infestations. Under this alternative, APHIS may opt to provide survey information and limited technical assistance, but any suppression program would be implemented by a Federal land management agency, a State agriculture department, a local government, or a private group or individual.

B. Insecticide Applications at Conventional Rates and Complete Area Coverage Alternative

Alternative B, insecticide applications at conventional rates and complete area coverage, is generally the approach that APHIS used for many years. Under this alternative, carbaryl, diflubenzuron (Dimilin®), or malathion would be employed. Carbaryl and malathion are insecticides that have traditionally been used by APHIS. The insect growth regulator, diflubenzuron, is also included in this alternative.

Applications would cover all treatable sites within the designated treatment block per label directions. The application rates under this alternative are as follows:

- 16.0 fluid ounces (0.50 pound active ingredient (lb a.i.)) of carbaryl spray per acre; or
- 10.0 pounds (0.50 lb a.i.) of 5 percent carbaryl bait per acre; or
- 1.0 fluid ounce (0.016 lb a.i.) of diflubenzuron per acre; or
- 8.0 fluid ounces (0.62 lb a.i.) of malathion per acre.

In accordance with EPA regulations, these insecticides may be applied at lower rates than those listed above. Additionally, coverage may be reduced to less than the full area coverage, resulting in lesser effects to nontarget organisms.

The potential generalized environmental effects of the application of carbaryl, diflubenzuron, and malathion, under this alternative are discussed in detail in the 2002 EIS (Environmental Consequences of Insecticide Applications at Conventional Rates and Complete Area Coverage Alternative, pp. 38–48). A description of anticipated site-specific impacts from this alternative may be found in the 2005 grasshopper EAs.

C. Reduced Agent Area Treatments (RAATs) Alternative

Alternative C, RAATs, is a recently developed grasshopper suppression method in which the rate of insecticide is reduced from conventional levels, and treated swaths are alternated with swaths that are not directly treated. The RAATs strategy relies on the effects of an insecticide to suppress grasshoppers within treated swaths while conserving grasshopper predators and parasites in swaths not directly treated. Either carbaryl, diflubenzuron, or malathion would be considered under this alternative at the following application rates:

- 8.0 fluid ounces (0.25 lb a.i.) of carbaryl spray per acre; or
- 10.0 pounds (0.20 lb a.i.) of 2 percent carbaryl bait per acre; or
- 0.75 fluid ounce (0.012 lb a.i.) of diflubenzuron per acre; or
- 4.0 fluid ounces (0.31 lb a.i.) of malathion per acre.

The area not directly treated (the untreated swath) under the RAATs approach is not standardized. In the past two years, the area that remains untreated within a treatment block has ranged from 25 to 50% percent in Idaho. The 2002 EIS analyzed the reduced pesticide application rates associated with the RAATs approach but assumed pesticide coverage on 100 percent of the area as a worst-case assumption. The reason for this is there is no way to predict how much area will actually be left untreated as a result of the specific action requiring this EA. For application to Idaho conditions in 2005, this Alternative would treat up to 50% of the land surface within a treatment block. Rather than suppress grasshopper populations to the greatest extent possible, the goal of this alternative is to suppress grasshopper populations to a desired level.

The potential environmental effects of application of carbaryl, diflubenzuron, and under this alternative are discussed in detail in the 2002 EIS (Environmental Consequences of

Reduced Agent Area Treatments (RAATs), pp. 49–57). A description of anticipated site-specific impacts from this proposed treatment may be found in the 2005 grasshopper EAs.

D. Modified Reduced Agent Area Treatments (RAATs) Alternative (Preferred Alternative)

Alternative D combines the RAATs approach explained in Alternative C with the concentration of carbaryl bait explained in Alternative B and eliminates the carbaryl spray component included in Alternatives B and C. Either carbaryl bait or diflubenzuron or malathion spray would be considered under this alternative at the following application rates:

- 10.0 pounds (0.50 lb a.i.) of 5 percent carbaryl bait per acre; or
- 10.0 pounds (0.20 lb a.i.) of 2 percent carbaryl bait per acre; or
- 0.75 fluid ounce (0.012 lb a.i.) of diflubenzuron per acre; or
- 6.0 fluid ounces (0.47 lb a.i.) of malathion per acre.

Although 0.20 lb a.i. of carbaryl bait may be sufficient for suppression of some species of grasshoppers in some situations, heavy grasshopper populations encountered immediately adjacent to crops may require the 0.50 lb a.i. rate for adequate suppression.

Aerial applications of bait or spray would be made to no more than 75% of the land area within any specific treatment block. Thus the assessments of potential environmental impacts discussed in the 2002 EIS (5% carbaryl bait pp. 39-42; 2% carbaryl bait, 8.0 fl oz malathion pp. 46-48, and 0.75 fluid ounce diflubenzuron pp. 50-57) are based on treatment rates up to 1.7X of those that would actually be applied under this alternative.

Ground applications of bait would be made no more than 75% of the land area within any specific treatment block, and may be made to as little as <1% of the land area within any specific treatment block. Ground applications would normally be made to existing roadsides and trailsides, but might be made off roads or trails with the concurrence of land managers

Environmental Monitoring

Monitoring involves the evaluation of three aspects of the Mormon cricket and grasshopper suppression program. The first monitoring area is the efficacy of the treatment. APHIS would determine how effectively the application of an insecticide has suppressed the Mormon cricket or grasshopper population within a treatment block and would report the results to the land manager and to APHIS management.

The second area included in monitoring is safety. This includes ensuring the safety of the program personnel through medical monitoring conducted specifically to identify sensitive or overexposed individuals.

The third area of monitoring is environmental monitoring. APHIS Directive 5640.1 commits APHIS to a policy of monitoring the effects of Federal programs on the environment. Environmental monitoring includes such activities as checking to make sure the insecticides are applied in accordance with the labels, and that sensitive sites and organisms are protected. The environmental monitoring recommended for Mormon cricket and grasshopper suppression programs involves monitoring sensitive sites such as bodies of water used for human consumption or recreation or which have wildlife value. Additionally, monitoring may include endangered or threatened species habitat, other sensitive wildlife species habitat, edible crops, and any sites for which the public has expressed concern or where humans might congregate (e.g., schools, parks, hospitals). APHIS does conduct post-treatment assessments to determine if any non-target impacts may be attributed to the treatments. Observers monitor wildlife including migratory birds to determine if any mortality or unusual behaviors are exhibited.

APHIS maintains the commitment to coordinate closely with USFWS on application of pesticides for grasshopper/Mormon cricket suppression in areas that are considered to be sensitive to listed or proposed species or their habitats. In those circumstances where conservation measures or buffers may reduce the efficacy of suppression activities, APHIS will immediately contact USFWS to develop site-specific measures to maintain protection to the environment while effectively treating areas in jeopardy of grasshopper/Mormon cricket outbreaks. As a general means of insuring that sensitive species are protected, APHIS would employ the measures listed in Table 5. The measures in Table 5 are the minimal protective measures which would be applied. Additional assessments will be made of all potential treatment blocks, and in conjunction with land managers APHIS may impose more stringent protective measures if they appear warranted. APHIS will confer with land managers to determine if any additional measures are warranted to protect migratory birds under the Migratory Bird Treaty Act.

Thank you for your ongoing cooperation in this matter.

Sincerely,

C. David McNeal, Jr.
State Plant Health Director

Table 2. Proposed 2006 Protection Measures and Determinations for Threatened and Endangered Species in Idaho Grasshopper/Mormon cricket Suppression Program	
Bald Eagle (T) Not likely to adversely affect (NLAA)	1-mile radius treatment-free zone around active aeries found on rivers and lakes with no flyovers of this area by contract pilots. Maintain a 2.5 mile no aerial spray zone upstream and downstream from the nest site with a 0.25 mile buffer along each side of the river. Lakes considered foraging areas would have 0.25 mile no-aerial spray buffer. (FWS 06/01/87)
Bull Trout (T) NLAA	In all areas proposed as critical habitat for bull trout, APHIS would utilize a ½ mile buffer for all aerial sprays and a 500 foot buffer for carbaryl bait. If there are treatment needs within the buffer area, APHIS would consult with FWS on a case-by-case basis to examine alternatives. (FWS 2003)
Ute Ladies'-Tresses (T) NLAA	Along the South Fork snake River and Henry's Fork River populations of Ute Ladies'-Tresses, APHIS would utilize a 3-mile buffer for all aerial spray treatments. (FWS 2003)
Bliss Rapids Snail (T), Utah Valvata Snail (E), Snake River Physa Snail (E), Idaho Springsnail (E), Banbury springs Lanx (E) NLAA	Along the Snake River APHIS would utilize a ½ mile buffer for all aerial sprays and a 500 foot buffer for carbaryl bait. If there are treatment needs within the buffer area, APHIS would consult with FWS on a case-by-case basis to examine alternatives. (FWS 2003)
Bruneau Hot Springsnail (E) NLAA	Within the recovery area as defined in the final BHSS recovery plan, APHIS would utilize a ½ mile buffer for all aerial sprays and a 500 foot buffer for carbaryl bait. If there are treatment needs within the buffer area, APHIS would consult with FWS on a case-by-case basis to examine alternatives. (FWS 2003)
Grizzly Bear (T) No Effect (NE)	High impact unlikely as a result of proposed pesticides at proposed rates of application. (FWS 06/01/87)
Gray Wolf (E) (experimental) NLAA	High impact unlikely as a result of proposed pesticides at proposed rates of application. (FWS 06/01/87)
Canada Lynx (T) NE	APHIS would not treat forested areas or rangelands that are not adjacent to crops but are surrounded by forest and are above 5000 feet in elevation in Idaho. (FWS 2003)
Northern Idaho Ground Squirrel (T) NLAA	APHIS would consult with FWS on a case by case basis for any treatments to the land described by FWS as North Idaho Ground Squirrel recovery area. (FWS 2005)

Table 3. Proposed 2006 Protection Measures and Determinations for Candidate Species in Idaho Grasshopper/Mormon cricket Suppression Program

Columbia Spotted Frog (C) Southern Idaho Ground Squirrel (C) Yellow-billed cuckoo (C) Christ's Paintbrush (C)	Insecticide application rates would be reduced below EPA maximum allowable rates. Carbaryl bait would be applied at no more than 25% of the labeled maximum rate and diflubenzuron would be applied at 37.5% of the labeled maximum rate. Additionally, treatment blocks would not receive full area coverage. 50% to >99% of treatment block would not receive direct application under preferred alternative. Aerial applications of carbaryl bait or diflubenzuron spray would not be made within 500 feet of water. Ground applications of carbaryl bait would not be made within 50 feet of water. APHIS would consult with USFWS before treating occupied Southern Idaho Ground Squirrel habitat. APHIS would not treat within one mile of known populations of Christ's Paintbrush.

Table 4. Proposed 2006 Protection Measures and Determinations for Proposed Species in Idaho Grasshopper/Mormon cricket Suppression Program

Slickspot Peppergrass (P)	Insecticide application rates would be reduced below EPA maximum allowable rates. Carbaryl bait would be applied at no more than 25% of the labeled maximum rate and diflubenzuron would be applied at 37.5% of the labeled maximum rate. Additionally, treatment blocks would not receive full area coverage. 50% to >99% of treatment block would not receive direct application under preferred alternative. APHIS would follow the provisions of the Candidate Conservation agreement. APHIS would not apply spray treatments within 3 miles of known sites unless land managers made a special request to protect the plant from grasshoppers/Mormon crickets.

Table 5. Proposed 2006 Protection Measures and Determinations for Sensitive Species or Species Under Review in Idaho Grasshopper/Mormon cricket Suppression Program

Bonneville and Yellowstone Cutthroat Trout , Redband Trout and Leatherside chub (S) Mulford's, Mourning, Picabo, Snake River, Lost river, Drummonds, Two-Groove, Meadow, Lemhi, and Plains Milkvetches; Woven-Spore Lichen; Malheur Princesplume; Janish's Penstemon; Matted Cowpie Buckwheat; Winged-seed and St. Anthony Evening Primroses; Scpal-tooth Dodder; Giant Hellborine; False Mountain Willow; and Scapose Silene (S) Western Burrowing Owl, Northern Harrier, Swainson's Hawk, and Upland Game Birds including sage grouse and sharp tail grouse. (S) Western Toad, Woodhouse's Toad, and Northern Leopard Frog (S) Western Ground Snake, Longnose Snake and Common Garter Snake (S) Townsend's Big Eared Bat, Spotted Bat, Western Small-footed Myotis, Long Eared Myotis, Fringed Myotis, Long-legged Myotis, Western Pipistrelle, and Yuma Myotis (S) Kit Fox (S)	Under the preferred alternative-- Insecticide application rates would be reduced below EPA maximum allowable rates. Percentage of EPA maximum allowable rates which would be applied: carbaryl bait 25% diflubenzuron spray 37.5% malathion spray 50% Additionally, treatment blocks would not receive full area coverage. 25% to >99% of treatment block would not receive direct application. Aerial applications of carbaryl bait or diflubenzuron, or malathion spray would not be made within 500 feet of water. Ground applications of carbaryl bait would not be made within 50 feet of water.

Table 1. General direct and indirect effects of proposed pesticides, recommended protective and mitigation measures, and resulting determinations for non-target species in Idaho 2006 Rangeland Grasshopper/Mormon cricket Suppression Programs. Page 1.

Non-Target Species and Species Groups	Special Status Species	Direct Toxic Effects			Indirect Effects	Protective and Mitigation Measures	Determination and rationale
		Malathion	Carbaryl	Dimilin			
Aquatic Invertebrates							
Molluscs/snails Banbury Springs limpet Bliss Rapids snail Idaho springsnail Snake River physa snail Utah valvata snail	E T E E E	Very high	Very high	None to Slight	2	0.5 mile buffer from Snake River /dimilin, or malathion; 500 feet for carbaryl bait	NLAA (1, 2)
Bruneau hot springsnail	E	Very high	Very high	None to Slight	2	Within recovery area 0.5 mile buffer w/dimilin, malathion; 500 feet for carbaryl bait	NLAA (1, 2)
Fish							
Bull Trout	T	Moderate - High	Very high	Slight	1, 2, 3, 4	0.5 mile buffer w/dimilin, malathion; 500 feet for carbaryl bait	NLAA (1, 2, 3)
Bull Trout Critical Habitat	PCH					0.5 mile buffer w/dimilin, malathion; 500 feet for carbaryl bait	NJ (1,2,3)
Amphibians							
Columbia Spotted Frog	C	Very High (aquatic stages)	Moderate - high	Low	1, 2, 3, 4	500 ft buffer w/ aerial applications; 50 ft w carbaryl bait by ground	NLAA (2)

Table 1. General direct and indirect effects of proposed pesticides, recommended protective and mitigation measures, and resulting determinations for non-target species in Idaho 2006 Rangeland Grasshopper/Mormon cricket Suppression Programs. Page 2.

Non-Target Species and Species Groups	Special Status Species	Direct Toxic Effects			Indirect Effects	Protective and Mitigation Measures	Determination and rationale
		Malathion	Carbaryl	Dimilin			
Mammals							
Northern Idaho Ground Squirrel	T	Moderate - High	Moderate	Low	2,3	Buffer will be delineated by the Service and provided to APHIS. Consult on case by case basis.	NLAA (1)
Southern Idaho Ground Squirrel	C	Moderate - High	Moderate	Low	2,3	Consult on case by case basis and utilize diflubenzuron if possible.	NLAA (1, 3)
Gray Wolf Grizzly Bear	X T	Moderate - High	Moderate	Low		Pesticides unlikely to have impact at proposed rates of application.	NJ (3) NE (3)
Canada Lynx	T	Moderate - High	Moderate	Low		Avoid likely habitat	NE (1,3)
Birds							
Riparian/Wetland Birds Yellow-billed Cuckoo	C	Moderate - High	Low - Moderate	Low	1, 4	0.5 mile buffer along Snake river w/spray; 500 feet for aerial Carbaryl	NLAA (1, 2)
Bald Eagle	T	Moderate - High	Low - Moderate	Low	4	1-mile treatment free zone; 2.5 mile up/down stream	NLAA (1, 2)

Table 1. General direct and indirect effects of proposed pesticides, recommended protective and mitigation measures, and resulting determinations for non-target species in Idaho 2006 Rangeland Grasshopper/Mormon cricket Suppression Programs. Page 3.

Non-Target Species and Species Groups	Special Status Species	Direct Toxic Effects			Indirect Effects	Protective and Mitigation Measures	Determination and rationale
		Malathion	Carbaryl	Dimilin			
Native Plants Ute ladies'-tresses	T	Low	Low	Low	5	No aerial spraying within 3 miles of known populations.	NLAA (1, 2)
Slickspot peppergrass	PE	Low	Low	Low	5	No aerial spraying within 3 miles of known sites unless land managers made special request..	NLAA (1, 2)
Christ's paintbrush	C	Low	Low	Low	5	APHIS would not treat within 1 mile of known populations.	NLAA (1, 2)

Table Key

Special Species Status

E Listed Endangered under the Endangered Species Act (Act)
P Proposed for listing under the Act
C Candidate Species for possible listing under the Act
T Listed Threatened under the Act
X Experimental, Non-essential Population

Indirect Effects

1. General loss of prey.
2. Limited mobility to move out of treated area.
3. Ingestion of chemicals from vegetation and insects could affect survival or reproductive fitness.
4. Direct pesticide application on young of year could adversely affect survival and population recruitment.
5. Loss of important pollinators.
6. Loss of seed dispersal agents.

Determinations

NE No Effect
NJ Not Likely to Jeopardize the Population
NLAA Not Likely to Adversely Affect

Rationale for Determinations

1. Avoiding known and potential habitats.
2. Buffer around known and potential habitats.
3. Adverse effects highly unlikely as a result of proposed chemical and application method.